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# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
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## **FIT-FOR-PURPOSE LAND ADMINISTRATION: CAPACITY DEVELOPMENT FOR COUNTRY IMPLEMENTATION**

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## **ABSTRACT**

This paper aims to analyze the requirements for capacity development as a precondition for implementing Fit- For-Purpose (FFP) Land Administration Systems at country level. The FFP concept is not a technical fix. It is about applying the spatial, legal and institutional methodologies that are most fit for the purpose of providing secure tenure for all by addressing the current constraints and allowing for incremental improvement over time.

This paper identifies five key steps for addressing this quest for capacity: (i) Analysis of the country context, (ii) Capacity assessment; (iii) Capacity development strategy, (iv) Implement capacity development strategy, and (v) Monitoring and evaluation.

## **Key words:**

Fit-For-Purpose, Land Administration, Capacity Development

## **Acknowledgement**

This paper draws from a recent publication entitled “Fit-For-Purpose Land Administration – Guiding Principles for Country Implementation” referred to as (GLTN/UN-HABITAT, 2016). The publication was produced as the outcome of a project funded by UN-HABITAT/GLTN and managed by The Netherlands’ Cadastre, Land Registry and Mapping Agency (Kadaster). The authors of the publication are Stig Enemark (DK) as lead author, Robin McLaren (UK) and Christiaan Lemmen (NL).

This paper should be seen as a follow-up on the recent paper entitled “Fit-For-Purpose Land Administration: Developing Country Specific Strategies for Implementation” referred to as (Enemark and McLaren, 2017) and presented at the Annual World Bank Conference on Land and Poverty, March 2017.

## 1. INTRODUCTION

This paper looks at implementing Fit-For-Purpose (FFP) land administration solutions at county level. Such decisions will of course be political and aimed at solving the specific land related problems of the country. This will require a country specific strategy, drawing from the FFP guiding principles as presented in the recent GLTN publication (GLTN/UN-HABITAT, 2016). This FFP publication is a response to the challenges set by the global sustainable development agenda. This agenda cannot be achieved without good land governance, including the operational component of land administration systems. The FFP approach should be seen as an enabler for implementing these global objectives especially in developing countries.

Only about 30% of the world's population are covered by official land administration systems while the rest potentially suffer from insecurity of tenure (McLaren 2015, Antonio et al. 2016). This is a human rights issue (Enemark et.al., 2014). Furthermore, in developing countries, existing investments in land administration are mainly built on legacy approaches; they are fragmented and have not delivered the required pervasive changes and improvements at scale. New solutions are required that can deliver security of tenure for all, are affordable and can be quickly developed and incrementally improved over time. The FFP approach to land administration has emerged to meet these challenging requirements.

However, the FFP concept is not just a technical fix. It is about applying the spatial, legal and institutional methodologies that are most fit for the purpose of providing secure tenure for all. This paper aims to analyse the requirements for capacity development as a precondition for implementing and sustaining such FFP Land Administration Systems at country level. This will also include a mind-set change within many of the professions currently delivering and operating land administration solutions.

“Don't start what you can't sustain”. This phrase is particularly relevant for implementing land administration systems at country level. Once established, the systems must be maintained and updated from day one; otherwise the efforts and investments in building the systems are easily wasted. The necessary capacity to manage and maintain the systems, therefore, must be developed up front in order to ensure efficient implementation and effective on-going maintenance and management.

The paper starts by briefly presenting the justification for, and the concept of a FFP approach to land administration, followed by a brief introduction to developing country specific strategies for implementation. The paper further looks at understanding the capacity development process and identifies five key steps of the process with a reference to the UNDP capacity development concept. These steps are then analysed in some details with regard to implementing a FFP approach to land administration.

## 2. WHY DO WE NEED A FFP APPROACH TO LAND ADMINISTRATION?

There are two key reasons why we need a FFP approach. The first relates to the Global Agenda as set by the Sustainable Development Goals (SDGs) and other framework such as the Voluntary Guidelines for responsible Governance of Tenure (VGGTs) and the New Urban Agenda (NUA); the second reason is about taking advantage of new and emerging technology development for changing the focus from costly high tech solutions to providing secure tenure for all (McLaren et al, 2018).

**The 2030 Global Agenda** provides a range of goals and targets that can never be achieved without having good land governance and well-functioning countrywide land administration systems in place. The SDGs provide a framework around which governments, especially in developing countries, can develop policies and encourage overseas aid programmes designed to alleviate poverty and improve the lives of the poor. In particular Targets 1.4 (secure tenure rights to land) and 5a (ownership or secure rights over agricultural land) of the SDGs will not be achieved without responsible land governance (Wehrmann, 2017). The SDGs also represent a rallying point for NGOs to hold governments to account. In other words, the SDGs are a key driver for countries throughout the world – and especially developing countries – to develop adequate and accountable land policies and regulatory frameworks for meeting the goals. Furthermore, it should be recognised that, next to the SDGs, the wider global agenda includes a range of global issues such as responsible governance of tenure, human rights and equity, climate change and natural disasters, rapid urbanisation, and land conflict situations - see figure 1.



Figure 1. The wider Global Agenda (Enemark, 2017)

**Providing secure tenure for all** should be a key target of any land administration system. However, most developing countries are struggling to find remedies for their many land problems that are often causing land conflicts, reducing investments and economic development, and preventing countries reaching their true potential. Existing investments in land administration have been built on legacy approaches, have been fragmented and have not delivered the required pervasive changes and improvements at scale (GLTN/UN-HABITAT, 2016, p. vii, Antonio et al., 2016). The standard solutions have not helped the most needy - the poor and disadvantaged - that have no security of tenure. In fact, the beneficiaries have often been the elite and organizations involved in land grabbing. It is time to rethink the approaches. New solutions are required that can deliver security of tenure for all, are affordable and can be quickly developed and incrementally improved over time. The FFP approach to land administration has emerged to meet these simple, but challenging requirements. This is also well articulated by recommendations in the New Urban Agenda, para 35 (UN, 2016).

The FFP starts by identifying and analysing the purpose(s) that the systems are intended to serve and systems should then be designed to meet/fit the purpose(s) rather than just following a rigid set of regulations and demands for accuracy. These unnecessary constraints, often imposed during colonial times, result in systems that are unsustainable and frankly unattainable at a nationwide scale for developing countries. However, not all the blame is related to rigid technical standards and expensive solutions. Of course, political commitment, corruption, largesse, lack of appropriate resources and a range of other factors play in as well (GLTN/UN-HABITAT, 2016, p.16)

**The FFP approach** is flexible and includes the adaptability to meet the needs of society today and can be incrementally improved over time. The FFP approach takes advantage of technology development that allows for aerial imagery to be provided quickly and at low / affordable costs. These imageries can be used for identifying and recording the visible boundaries of the individual land parcels rather than using conventional field surveys and complying with high accuracy standards. The identification and recording of visual boundaries is undertaken in a participatory process involving the local community. This simple identification and recording can be upgraded over time, e.g. triggered in response to social and legal needs of economic development, investments and also financial opportunities that may emerge over the longer term. The FFP approach thereby enables that land rights can be secured for all in a timely and affordable way. Similarly, the FFP approach looks at recording all rights – legal as well as legitimate – and enables for updating and upgrading over time in accordance with the continuum of land rights (UN-HABITAT/GLTN, 2008). The FFP approach also advocates for use of a flexible ITC approach and an integrated institutional framework without bureaucratic barriers.

### 3. THE FIT-FOR-PURPOSE CONCEPT

The FFP approach was introduced by (FIG/World Bank, 2014) and further unfolded in the recent GLTN publication on Fit-For-Purpose Land Administration – Guiding Principles for Country Implementation (GLTN / UN-HABITAT, 2016). In the context of this guide, the term “Fit-For-Purpose” means applying the spatial, legal, and institutional methodologies that are most fit for the purpose of providing secure tenure for all. This approach will enable the building of national land administration systems within a reasonable time and at affordable costs. The concept of FFP includes three core components: the spatial, legal and institutional frameworks, see Figure 2. Each of the frameworks are flexible and can be improved over time in response societal needs and financial resources.

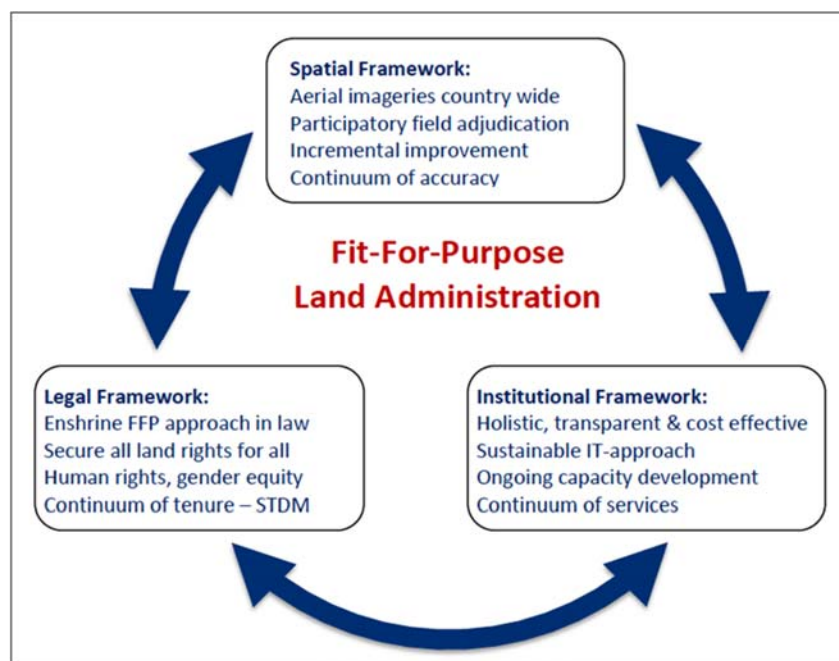


Figure 2. The FFP concept (GLTN/UN-HABITAT, 2016, p. 17)

The spatial framework aims to represent the way land is occupied and used. The scale and accuracy of this representation should be sufficient for supporting security of the various kinds of legal rights and other tenure forms through the legal framework as well as for managing these rights and the use of land and natural resources through the institutional framework. The FFP approach therefore needs to be enshrined in the land laws and for administering this regulatory setup, and the institutional framework must be designed in an integrated, transparent and user-friendly way. This administration again requires reliable and up to date land information that is provided through the spatial framework. (GLTN/UN-HABITAT, 2016, p. 18). Each of the three frameworks include four key principles that are explained in details in the publication.

#### 4. DEVELOPING COUNTRY SPECIFIC STRATEGIES FOR IMPLEMENTATION

The FFP publication (GLTN/UN-HABITAT, 2016) is not intended to be a manual. Instead, it provides guiding principles for building FFP land administration systems. These principles should not be interpreted as prescriptive, but should provide direction and guidance on building the spatial, legal and institutional frameworks in support of designing the country specific strategies for implementation. This design process is described in details in (Enemark and McLaren, 2017) and is summarised in the Figure 3 below:

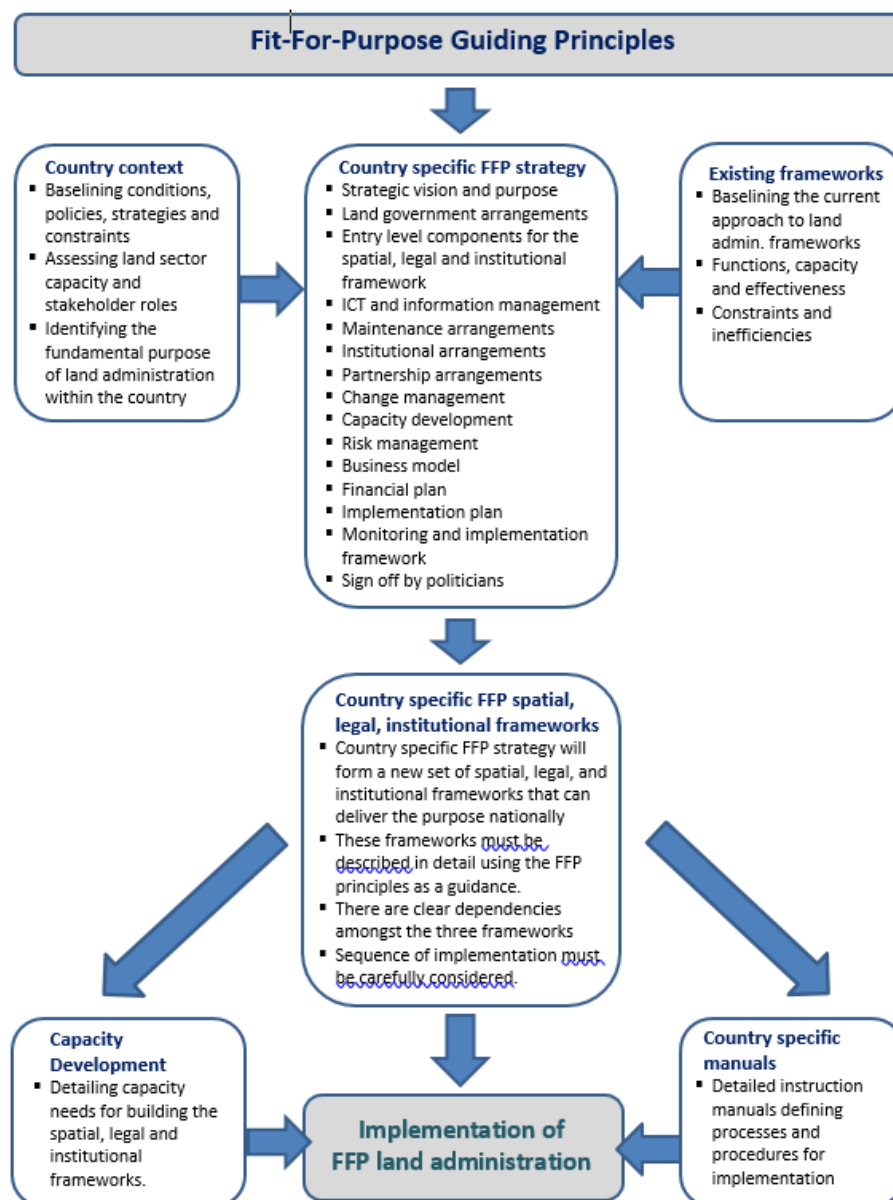


Figure 3. The use of the FFP Guide for developing country specific strategies for implementation.



## 5. UNDERSTANDING CAPACITY DEVELOPMENT

There is now an emerging agreement within the development community that capacity development is the engine of human development. Human, institutional and societal capacity remain critical for designing and implementing strategies towards achieving development objectives including the SDGs.

Capacity development refers to the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time.

(UNDP, 2009)

But what exactly do we mean by capacity development? Confusion around the term seems to have grown along with its popularity. For some, capacity development can be any effort to teach someone to do something, or to do it better. For others, it may be about creating new institutions or strengthening old ones. Some see capacity development as a focus on education and training, while others take a broader view of it as improving individual rights, access or freedoms. Such an integrated approach is also highlighted in (Pearson, et al., 2014). The reality is that capacity development contains elements of all these aspects. There are three levels where capacity is grown and nurtured: in an enabling environment, in organizations and within individuals. These three levels influence each other in a fluid way – the strength of each depends on, and determines, the strength of the others - see Figure 4.



### *The enabling environment:*

is the broad social system within which people and organizations function. It includes all the rules, laws, policies, power relations and social norms that govern civic engagement. It is the enabling environment that sets the overall scope for capacity development.



### *The organizational level:*

refers to the internal structure, policies and procedures that determine an organization's effectiveness. It is here that the benefits of the enabling environment are put into action and a collection of individuals come together. The better resourced and aligned these elements are, the greater the potential for growing capacity.



### *The individual level:*

are the skills, experience and knowledge that allow each person to perform. Some of these are acquired formally, through education and training, while others come informally, through doing and observing. Access to resources and experiences that can develop individual capacity are largely shaped by the organizational and environmental factors described above, which in turn are influenced by the degree of capacity development in each individual.

Figure 4. These three levels of capacity development (Source: UNDP, 2009, p 11)

An essential ingredient in the capacity development approach is *transformation*. For an activity to be considered as capacity development, it must bring about transformation that is generated and sustained over time from within. Transformation of this kind goes beyond performing tasks; instead, it is more a matter of changing mindsets and attitudes.

Ideally, capacity development responses should begin by asking some fundamental questions such as:

To what end do we need to develop capacity – what will be its purpose?

Whose capacity need to be developed? Which groups or individuals needs to be empowered?

What kinds of capacity need to be developed to achieve the broader development objective?

(UNDP, 2009, p. 19)

UNDP offers a five-step model for understanding the capacity development process as shown in Figure 5.

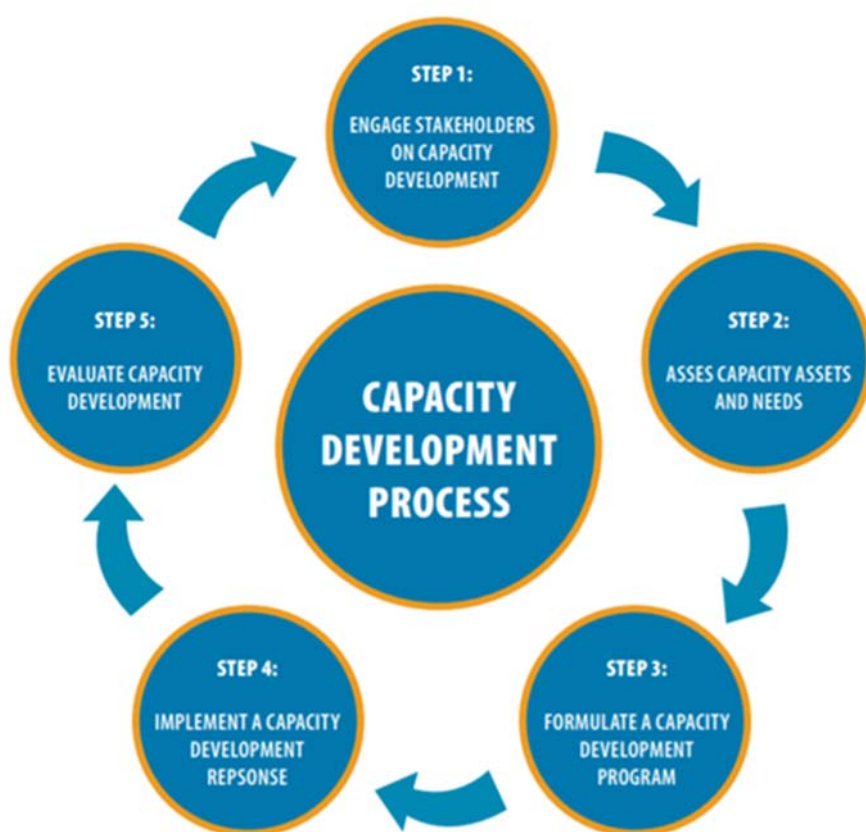


Figure 5. The five steps of the capacity development cycle (source: UNDP, 2009, p. 21).

The following chapter looks at each of the five steps for the capacity development process related to implementing a FFP approach to land administration at country level.

## **6. CAPACITY DEVELOPMENT FOR FFP LAND ADMINISTRATION**

The FFP approach to land administration is different to conventional land administration / cadastral systems. This difference is also reflected in the demand for capacity development.

Conventional land administration systems use documentation of the surveyed land parcels, undertaken by professional land surveyors, as a basis for entering rights into a land registry. In contrast, FFP land administration uses aerial imagery, wherever possible or appropriate, to identify, delineate and adjudicate the visible parcel boundaries and the connected land rights. This is essentially a participatory and inclusive approach undertaken by locally trained land officers and involving all community stakeholders. Furthermore, while conventional cadastral systems are highly standardized, the FFP approach is flexible in terms of the accuracy demanded (and associated measurement approaches) and in relation to tenure types to be included and secured.

While conventional land administration systems aim at recording each land parcel once and for all according to high technical standards, the FFP approach aims at the purpose of providing secure tenure for all. This can be shaped according to a country's requirements and the system can then be upgraded and incrementally improved over time. A nationwide approach encompassing all tenure types and land is then affordable and can be achieved in a reasonable timeframe, depending on the size of the country. The approach can be sustained by a network of locally trained land officers, who expand the capacities of the limited number of land professionals.

Importantly, prior to building the spatial framework and issuing any certificates of land rights, it must be ensured that the regulations and institutions for maintaining and updating the FFP land administration system are in place. Without the institutional capacity and also incentives for the parties to update the system in relation to the transfer of land rights and land transfers, it will quickly be outdated and unreliable and lead to waste of investments for building the system in the first place. On the other hand, in some cases land recordation and safeguarding of land rights can be justified as a means in itself just to avoid potential land grabbing.

The capacity development process necessary for building such FFP land administration is outlined in the five steps described below, following the UNDP Capacity Development Cycle presented above.

**Step 1. Analysis of the country context / engage stakeholders.** This first step will involve identifying and baselining the conditions and policies prevalent within country that constrain and shape the way that FFP land administration can be implemented within the country. In many developing countries, a National Land Policy does not exist and policies, where they exist, are fragmented across sub-sectors of land administration and management. Importantly, any national land policies need to be revised to accommodate the FFP approach.

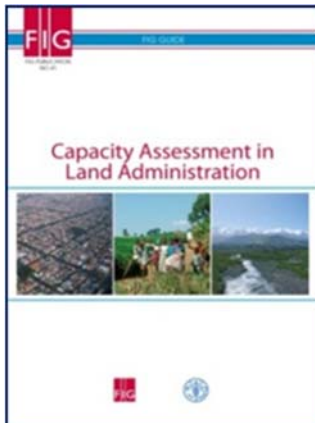
This process will also baseline the current approaches to the spatial, legal, and institutional frameworks and their function, gaps, conflicts and constraints, as well as identification and analysis of the various stakeholders in order to understand their current engagement and strategic importance. These analyses are described in more details in (Enemark and McLaren, 2017) as the entry to designing a country specific FFP strategy for land administration.

Based on these analyses the first step of the capacity development process is about getting a dialogue started amongst those who stand to benefit from the enhanced capacity. The aim is to get all stakeholders, in the public, private and third sectors, committed to the process – to take ownership and to establish accountability for who will do what.

**Step 2. Assess capacity.** This is about establishing the baseline from which progress should be measured through identifying existing capacity assets as well as the desired level of capacity anticipated to achieve development or organizational objectives

Capacity assessment or diagnosis is an essential basis for the formulation of coherent strategies for capacity development. This includes a thorough, structured analytical process whereby the various dimensions of capacity are assessed within a broader systems context, as well as being evaluated for specific entities and groups of individuals within the system. Capacity assessment provides a baseline of current capabilities across the land sector stakeholders, e.g. public sector land institutions, private sector, professional associations and NGOs, for example.

The publication “Capacity Assessment in Land Administration (FIG, 2008) provides a methodology for such in-country self-assessment of capacity needs, e.g. in relation to donor projects or land reform programmes.



The Guidelines for Capacity Assessment in Land Administration (FIG/FAO, 2008) are developed to serve as a logical framework for addressing each level from land policy, policy instruments, and legal framework; over mandates, business objectives, and work processes; to needed human resources and training programs. For each level, the guidelines pose a number of questions to be considered based on some comments reflecting a best practice approach. For each level, the capacity of the system can be assessed and possible or needed improvements can be identified and met also where limited resources are available.

Capacity assessment provides a baseline of current capabilities across the land sector stakeholders, e.g. public sector land institutions, private sector, professional associations and NGOs, for example. The baseline is then compared to the capacity requirements stated in the country specific FFP land administration strategy and gaps are identified that have to be filled to support FFP land administration, e.g. the assessment will include a calculation of the number of staff and professionals available within the various fields of the land sector - both public and private. This will then be compared to the number of staff and professionals needed for building and managing a fully implemented FFP land administration system. This information is then used to create the capacity development response.

**Step 3. Formulate a capacity development response.** This should of course build on existing capacity assets to address the gaps identified in the capacity assessment. The response should combine actions across the three levels of enabling environment, institutional level and individual level, and it should contain a combination of quick impact initiatives and medium to long term initiatives.

Capacity development is a concept that is broader than Human Resource Development (HRD) since it includes an emphasis on the overall system, environment and context within which individuals, organizations and societies operate and interact. Further, land administration is a cross sectoral and multidisciplinary area that includes technical, legal, managerial, political, economic, societal and institutional dimensions. An adequate response in terms of capacity development measures must reflect this basic characteristic that includes assessment and development at all three levels: societal, organisational and individual, see figure 6. Often capacity issues are first addressed at the organisational level. Organisational capacity – such as the capacity of the national cadastral agency or the cadastral infrastructure and processes – is influenced by not only the internal structures and procedures of the agency, but also by the collective capabilities of the staff on the one hand and a number of external factors, the enabling environment, on the other.

Such external factors may be political, economic or cultural issues that may constrain or support performance, efficiency, and legitimacy as well as the whole level of awareness of the values of land administration systems. By taking this approach, capacity measures can be addressed in a more comprehensive societal context.

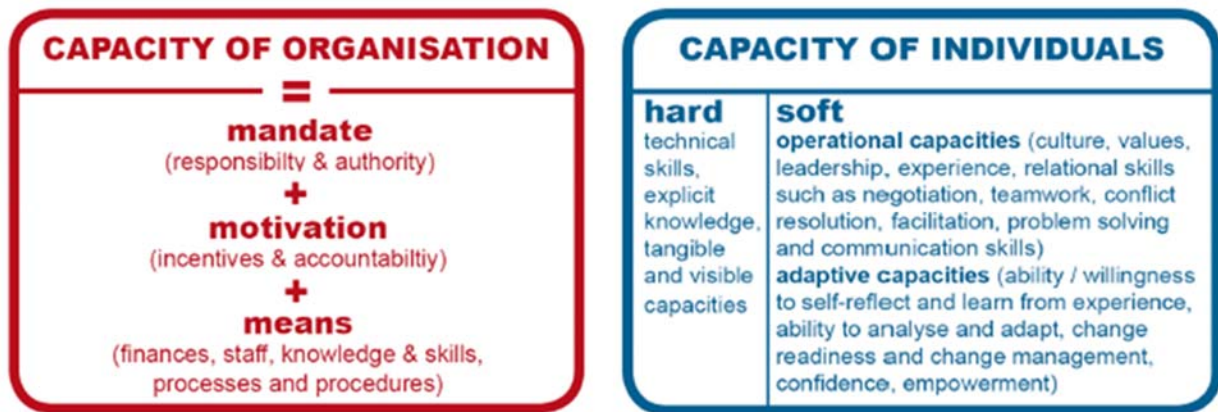


Figure 6. Capacity of organizations and individuals

A key feature of the FFP approach is the use of a network of locally trained land officers acting as trusted intermediaries and working with communities to support the identification of land parcels and adjudication of the connected land rights. This approach builds trust within the communities and allows the process to be highly scalable. In principle, the systems can be developed in parallel within all regions of the country, but an incremental rollout based on “train the trainers” approach is more effective. However, this will require development of an engagement strategy to raise the level of understanding and implementation.

**Step 4. Implement a capacity development response.** This is the point where all the thinking, assessing, planning, analyzing and designing is tested in the real world. Preferably, implementation should be managed through national systems and processes rather through parallel systems of external partners.

The lack of trained personnel is often seen as the main barrier for implementation of the new land reform policy. In the case of the FFP approach, the immediate need for local land officers can be met by a few days of training. This approach was successfully implemented in the recent land registration project in Rwanda with the involvement of over 100.000 locally trained land officers. The short-term needs for trained land officers and technicians as well as the longer terms needs for qualified professionals can be met by implementing a scalable training program, as was successfully implemented in Malawi in the early 2000s (Enemark and Ahene, 2002). The capacity within the land sector will then be incrementally improved in line with the principles of the FFP approach.

**Step 5. Evaluate capacity development.** This is often undertaken with a focus mainly on such elements that are easily measurable, such as funds disbursed, number of workshops or number of people trained. However, the real impact of capacity development should be measured in relation to achieving the overall development objectives.

A specific evaluation framework should be designed to monitor and evaluate the effectiveness of the capacity development activities over time and to provide feedback for improvements. This also relates to instigation of a self-monitoring culture. It is necessary to establish and monitor processes to facilitate on-going change and identify new needs and trends.

Once the first major change program has been implemented successfully, future change programs need to build on the knowledge gained from and the relationships and groundwork established in that first one. This should translate into future changes becoming easier and faster. It is necessary to establish and monitor processes to facilitate on-going change and identify new needs and trends (Angehrn and Atherton, 1999).

## **7. CONCLUDING REMARKS**

There is a general consensus that governing the people to land relationship is at the heart of the 2030 global agenda. There is an urgent need to build simple and basic systems using a flexible and affordable approach to identify the way land is occupied and used, whether these land rights are legal or locally legitimate. The systems need to be simple and flexible in terms of spatial identification, legal regulations and institutional arrangements to meet the actual needs in society today and they can then be incrementally improved over time. Building such spatial, legal, and institutional frameworks will establish the link and trust between people and land. This will enable the management and monitoring of improvements in meeting aims and objectives of adopted land policies as well as meeting the global agenda.

However, as stated up front in this paper: “Don’t start what you can’t sustain”. This phrase is particularly relevant for implementing land administration systems at country level. Once established, the systems must be maintained and updated from day one; otherwise the efforts and investments in building the systems are easily wasted. The necessary capacity to manage and maintain the systems, therefore, must be developed up front in order to ensure efficient implementation and effective on-going maintenance and management.

## REFERENCES

- Angehrn, A. and Atherton, J. (1999): A Conceptual Framework for Assessing Development Programmes for Change Agents.  
[https://www.insead.edu/facultyresearch/faculty/personal/aangehrn/documents/9-A\\_Conceptual\\_Framework\\_for\\_Assessing\\_Development\\_Programmes\\_for\\_Change\\_Agents.pdf](https://www.insead.edu/facultyresearch/faculty/personal/aangehrn/documents/9-A_Conceptual_Framework_for_Assessing_Development_Programmes_for_Change_Agents.pdf)
- Antonio, D., Augustinus C. and Zevenbergen J. (2016). Social Tenure Domain Model: An Emerging Land Governance Tool. In Zevenbergen J., De Vries W. and Bennett R. (Ed), Advances in Responsible Land Administration. CRC Press Taylor and Francis Group. London and New York.
- Enemark, S. (2017): A Fit-For-Purpose approach to Land Administration in Africa in support of the new 2030 Global Agenda. UN-ECA Conference on Land Policy in Africa, Addis Ababa, Ethiopia, 14-17 November 2017.  
[https://www.uneca.org/sites/default/files/uploaded-documents/LPI/CLPA\\_2017/Presentations/a\\_fit-for-purpose\\_approach\\_to\\_land\\_administration\\_in\\_africa.pdf](https://www.uneca.org/sites/default/files/uploaded-documents/LPI/CLPA_2017/Presentations/a_fit-for-purpose_approach_to_land_administration_in_africa.pdf)
- Enemark, S. and McLaren, R. (2017): Fit-For-Purpose Land Administration: Developing Country Specific Strategies for Implementation. Annual World Bank Conference on Land and Poverty, Washington D.C: 20-24 March 2017.  
[https://www.conftool.com/landandpoverty2017/index.php?page=browseSessions&form\\_session=673&presentations=show](https://www.conftool.com/landandpoverty2017/index.php?page=browseSessions&form_session=673&presentations=show)
- Enemark, S., Hvingel, L., Galland, D. (2014): Land Administration, Planning and Human rights. Planning Theory, Vol. 13. No 4, pp 331-348.  
[http://vbn.aau.dk/files/208815118/Enemark\\_Hvingel\\_Galland\\_2014\\_PT.pdf](http://vbn.aau.dk/files/208815118/Enemark_Hvingel_Galland_2014_PT.pdf)
- Enemark, S. and Ahene, R. (2002): Capacity Building in Land Management – Implementing land policy reforms in Malawi. Proceedings of FIG XXII International Congress, Washington, D.C. USA, April 19-26, 2002.  
[http://www.fig.net/resources/proceedings/fig\\_proceedings/fig\\_2002/Ts7-7/TS7\\_7\\_enemark\\_ahene.pdf](http://www.fig.net/resources/proceedings/fig_proceedings/fig_2002/Ts7-7/TS7_7_enemark_ahene.pdf)
- FIG/FAO (2008): Capacity Assessment in Land Administration. FIG publication no. 41. FIG Office, Copenhagen, Denmark. <http://www.fig.net/pub/figpub/pub41/figpub41.htm>
- GLTN/UN-HABITAT (2016): Fit-For-Purpose Land Administration: Guiding Principles for Country Implementation. Nairobi. 120 pp. <https://gltn.net/home/download/fit-for-purpose-land-administration-guiding-principles-for-country-implementation/>
- McLaren, R. (2015). How Big is Global Insecurity of Tenure? GIM International, Nov. 2015.  
<http://member.gim-international.com/Geomares/magazine/gim/magazine.jsp>
- McLaren, R, Fairlie, K., D’Souza, G. and Kelm, K. (2018): New Technology and Emerging Trends: The State of Play for Land Administration, World Bank Publication, Washington DC.
- Pearson, J., Enemark S. and Duplessis J. (2014). The GLTN Capacity Development Strategy. UN-Habitat/Global Land Tool Network. Nairobi. <https://unhabitat.org/gltn-capacity-development-strategy/>



UNDP (2009): Capacity development: A UNDP Primer.

[http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG\\_PrimerReport\\_final\\_web.pdf](http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG_PrimerReport_final_web.pdf)

United Nations (2016): New Urban Agenda. United Nations Conference on Housing and Sustainable Development: Habitat III, Quito, Ecuador, 17-20 Oct. 2016.

<http://habitat3.org/the-new-urban-agenda/>

UN-Habitat/GLTN (2008). Secure Land Rights for All. Nairobi. Available at:

<http://mirror.unhabitat.org/pmss/listItemDetails.aspx?publicationID=2488>

Wehrmann, B. (2017). Land Governance: A Review and Analysis of Key International Frameworks. UN-Habitat/Global Land Tool Network. Nairobi.

<https://gltn.net/home/2017/11/03/land-governance-a-review-and-analysis-of-key-international-frameworks/>

Williamson, Enemark, Wallace, Rajabifard (2010): Land Administration Systems for Sustainable Development. ESRI Academic Press, Redlands, California, USA.

[http://csdila.unimelb.edu.au/publication/books/esri/LADMIN\\_book.pdf](http://csdila.unimelb.edu.au/publication/books/esri/LADMIN_book.pdf)

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